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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
EASHOO, MARK

ART UNIT	PAPER NUMBER
1732	8

DATE MAILED: 07/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/067,888	Applicant(s) BELLI ET AL.	
	Examiner Mark Eashoo, Ph.D.	Art Unit 1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 April 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *20-34* is/are pending in the application.

4a) Of the above claim(s) *32-34* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *20-31* is/are rejected.

7)☒ Claim(s) *21 and 27* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *1.5, 4* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Election/Restriction

Applicant's election with traverse of claim group I, claims 20-31, with traverse, in Paper No. 7, filed 16-APR-2003, is acknowledged. The traversal is on the ground(s) that there is no serious burden on the examiner. This is not found persuasive because: Applicant's argument is not persuasive because: 1) applicant has failed to argue the basis of the restriction and has not shown that the claim groupings are not distinct; 2) applicant's mere belief that there is no serious burden on the examiner is not well founded and incorrect because the specifics of the process, namely the steps therein, do not require examining the specific structure of the apparatus, but rather only what or how the apparatus structure materially effects the claimed process steps.

The requirement is still deemed proper and is therefore made FINAL.

Claims 32-34 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected claim grouping, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 7.

Claim Objections

Claims 21 and 27 are objected to because of the following informalities: Claims 21 and 27 end with two periods. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 24 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically, claim 24 includes limitations within parentheses which renders the claim indefinite because it cannot be clearly ascertained if the limitation, essentially step of measuring, is part of the claim. For the purpose of further examination, the limitation within the parentheses have not been considered as part of the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 20, 21, 25, and 26 are rejected under 35 USC 103(a) as being unpatentable over Gliss (US Pat. 2,593,136) in view of Gau et al. (US Pat. 5,367,030) and Castellani et al. (US Pat. 6,495,760).

Regarding claim 20: Gliss teaches the basic claimed method of producing a cable having at least one polymeric covering layer, comprising: an extruder having a casing cylinder (Fig. 1, element 13), a screw having a preset pitch (Fig. 1, element 10), a filtration section having a support plate with plurality of sectors (Figs. 1-2); conveying a conducting element through the extrusion apparatus (1:5-13 and Fig. 1, unmarked material near label 38); filtering (Fig. 1); and depositing a filtered composition onto a conductor (Fig. 1).

Gliss does not teach feeding a material to an extruder via a hopper. Nonetheless, Gau et al. teaches feeding a material to an extruder via a hopper located upstream of the extruder barrel (4:45-61). Gliss and Gau et al. are combinable because they are from the same field of endeavor, namely, extrusion of resins for cable coatings. At the time of invention a person of ordinary skill in the art would have found it

obvious, if not intrinsic, to have used a hopper to feed an extruder, as taught by Gau et al., in the process of Gliss, in order continuously feed the extruder thereby avoiding numerous start-ups and shut-downs.

Gliss does not teach a mineral filler in excess of 30%. Nonetheless, Castellani et al. teaches a mineral filler in excess of 30%. (1:58-2:6). Gliss and Castellani et al. are combinable because they concerned with a similar technical difficulty, namely, resins for cable coatings. At the time of invention a person of ordinary skill in the art would have found it obvious to have a resin filled with a mineral filler in excess of 30%., as taught by Castellani et al., in the process of Gliss, since Castellani et al. suggests that this is the level of mineral filler needed to achieve successful flame resistance. It is noted that flame resistance is required for cables in modern construction within the US.

Regarding claim 21: Gliss teaches a filter plate located downstream of the extrusion screw (Fig. 1).

Regarding claims 22 and 23: Gliss does not teach a specific filtration efficiency. However, since Gliss teaches the instantly claimed apparatus structure, it is intrinsic that Gliss achieves the same filtration efficiency. If Applicant argues that it is not inherent of Gliss, then it would be the examiners position that the claim and disclosure does not adequately teach how to obtain such filtration efficiency.

Regarding claims 25 and 26: Castellani et al. a filler in the amount of usually more than 50% (1:58-2:6) for fire resistance. Castellani et al. would have been combined with Gliss for the same reasons as set forth above.

Claims 20, 24-26, and 29-30 are rejected under 35 USC 103(a) as being unpatentable over Gliss (US Pat. 2,593,136) in view of Gau et al. (US Pat. 5,367,030) and Hall (US Pat. 6,025,422).

Regarding claims 20 and 24-26:Gliss teaches the basic claimed method of producing a cable having at least one polymeric covering layer, comprising: an extruder having a casing cylinder (Fig. 1, element 13), a screw having a preset pitch (Fig. 1, element 10), a filtration section having a support plate with plurality of sectors (Figs. 1-2); conveying a conducting element through the extrusion apparatus (1:5-13 and Fig. 1, unmarked material near label 38); filtering (Fig. 1); and depositing a filtered composition onto a conductor (Fig. 1).

Gliss does not teach feeding a material to an extruder via a hopper. Nonetheless, Gau et al. teaches feeding a material to an extruder via a hopper located upstream of the extruder barrel (4:45-61). Gliss and Gau et al. are combinable because they are from the same field of endeavor, namely, extrusion of resins for cable coatings. At the time of invention a person of ordinary skill in the art would have found it

obvious, if not intrinsic, to have used a hopper to feed an extruder, as taught by Gau et al., in the process of Gliss, in order continuously feed the extruder thereby avoiding numerous start-ups and shut-downs.

Gliss does not teach a mineral, fire resistant, filler in the range of 50-80% (see instant claims 25 and 26). Nonetheless, Hall teaches a mineral, fire resistant, filler in the range of 60-65% (2:1-5). Gliss and Hall are combinable because they concerned with a similar technical difficulty, namely, resins for cable coatings. At the time of invention a person of ordinary skill in the art would have found it obvious to have a resin filled with a mineral, fire resistant, filler in the range of 50-80%, as taught by Hall in the process of Gliss, since Hall suggests that this is the level of mineral filler needed to achieve successful flame resistance. It is noted that flame resistance is required for cables in modern construction within the US.

Gliss does not teach resin with a melt index lower than 15 g/10 min. Nonetheless, Hall a resin with a melt index lower than 15 g/10 min (5:50-61). At the time of invention a person of ordinary skill in the art would have found it obvious to have used a resin with a melt index lower than 15 g/10 min, as taught by Hall in the process of Gliss, since Hall suggests that this is the range of melt index is suitable for cable jacket applications.

Regarding claims 29 and 30: Gliss does not teach pulling a conductor at a rate of 600-1500 m/min. However, Hall teaches pulling a conductor at a controlled rate (9:30-43). Pulleys and/or gears are conventional, if not intrinsic in the extrusion art for pulling an extrudate from a die (eg. caterpillar type unit). Similarly, the extrusion/pulling rate is a well known process variable (depending upon equipment size, the polymer used, operating temperature, coating thickness desired, etc.) which is commonly optimized in the extrusion, through routine experimentation, in order to form the most amount of a desired product in the shortest time. At the time of invention a person of ordinary skill in the art would have found it obvious to have pulled a conductor at a controlled rate, as taught by Hall in the process of Gliss, since Hall suggests that this is an equivalent and alternative means to move a conductor through an extrusion die.

Claims 27, 28, and 31 are rejected under 35 USC 103(a) as being unpatentable over Gliss (US Pat. 2,593,136) in view of Gau et al. (US Pat. 5,367,030), Castellani et al. (US Pat. 6,495,760), and Jocteur (US Pat. 4,234,531).

Gliss teaches the basic claimed method of producing a cable having at least one polymeric covering layer, comprising: an extruder having a casing cylinder (Fig. 1, element 13), a screw having a preset pitch (Fig. 1, element 10), a filtration section having a support plate with plurality of sectors (Figs. 1-2); conveying a conducting element through the extrusion apparatus (1:5-13 and Fig. 1, unmarked material near label 38); filtering (Fig. 1); and depositing a filtered composition onto a conductor (Fig. 1).

Gliss does not teach feeding a material to an extruder via a hopper. Nonetheless, Gau et al. teaches feeding a material to an extruder via a hopper located upstream of the extruder barrel (4:45-61). Gliss and Gau et al. are combinable because they are from the same field of endeavor, namely, extrusion of resins for cable coatings. At the time of invention a person of ordinary skill in the art would have found it obvious, if not intrinsic, to have used a hopper to feed an extruder, as taught by Gau et al., in the process of Gliss, in order continuously feed the extruder thereby avoiding numerous start-ups and shut-downs.

Gliss does not teach a mineral filler in excess of 30%. Nonetheless, Castellani et al. teaches a mineral filler in excess of 30%. (1:58-2:6). Gliss and Castellani et al. are combinable because they concerned with a similar technical difficulty, namely, resins for cable coatings. At the time of invention a person of ordinary skill in the art would have found it obvious to have a resin filled with a mineral filler in excess of 30%., as taught by Castellani et al., in the process of Gliss, since Castellani et al. suggests that this is the level of mineral filler needed to achieve successful flame resistance. It is noted that flame resistance is required for cables in modern construction within the US.

Gliss does not teach cross-linking and cooling units. However, Jocteur teach cross-linking and cooling units (4:8-23). Gliss and Jocteur are combinable because they are from the same field of endeavor, namely forming coatings on wires/cables. At the time of invention a person of ordinary skill in the art would have found it obvious to have used cross-linking and cooling units, as taught by Jocteur, in the process of Gliss, in order to form a cross-linked coating, thereby forming a coating that will not melt when heated when the conductor is in use. Jocteur teaches both dry vulcanization/cross-linking unit (5:25) and also a gaseous cross-linking process (5:26) and suggests that either may be used (5:27-29). Gaseous or steam ovens are known as a wet process and thus it would be obvious, if not intrinsically required, to use a downstream drying stage with such oven.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Henning '126 and'056, Riper, Harrell et al., Roberts et al., Shimba et al., Swanson et al., Jocteur '648, and Prescher et al. all teach the basic state of the art.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Eashoo, Ph.D. whose telephone number is (703) 308-3606. The examiner can normally be reached on 7am-3pm EST, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (703) 308-3853. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Mark Eashoo, Ph.D.
Primary Examiner
Art Unit 1732
26/ Jun /03

me
June 26, 2003